

ANNUAL REPORT

OF

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AND

FRED DRAPER, ASSISTANT COUNTY AGRICULTURAL AGENT

MARICOPA COUNTY

DECEMBER 1934 to DECEMBER 1935

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### III. SUMMARY OF ACTIVITIES AND ACCOMPLISHMENTS

The results obtained during the year from Extension Service activities in Maricopa County have been much more far-reaching than was anticipated. The surprising part of the program has been that the major projects in the County have been carried throughout the year with outstanding results, particularly those on Pure Seed, Weed Control, Insect Pest Control, 4-H Club activities and the Dairy and Poultry projects.

Greater results have been obtained through the Agricultural Adjustment Administration programs than was manifested last year. Many individuals who severely criticized the program at the beginning of the year, are now not only supporting it but are actually signing adjustment contracts. This, we have found particularly true in the wheat and cotton programs, the cotton acreage reduction program having increased from 759 contracts in 1934 to 1039 contracts in 1935. This, we believe, is due to educational meetings and personal contacts made by farm leaders in the County who have so untiringly supported the program.

The Phoenix Milk Market License and Agreement has had one year's successful operation and a very favorable report is received from the dairy producers and distributors that this will continue for the coming year.

In carrying out Extension Work in the County during the past year there were 2,123 farm visits made and a total of 7,330 direct office calls and an estimated 11,771 telephone calls. Two thousand, nine hundred and eighty-nine individual letters were written with 194 circular letters prepared and 26,787 copies mailed. Thirty radio talks were given during the year on agricultural subjects over KTAR and through the 4-H Club Program, 14 talks were presented.

Thirty-nine individual demonstrations were given with a total attendance of 1352. There were 285 meetings held and participated in by representatives of the County Agent's office, with an attendance of 8,268 persons.

It is estimated that over 5,000 farmers changed their practices as a result of the Agricultural Extension Program.

#### IV. CHANGES IN COUNTY EXTENSION ORGANIZATION

##### (1) Form of Organization

The Maricopa County Farm Bureau is the organization which directly sponsors the Agricultural Extension Service activities in the County. During the past year, considerable activity has been manifested by the County Farm Bureau Directors. Two new districts were organized and good strong local Farm Bureau Presidents elected.

In June of this year the Board of Directors of the Farm Bureau saw fit to raise the County Agent's budget from \$7550 to \$8630, a raise of \$1080. Six hundred dollars of this was definitely appropriated for the carrying on of 4-H Club Work in the County.

The office force has the same number of employees that it had a year ago. At this time there is the County Agricultural Agent, Home Demonstration Agent, three Assistant County Agricultural Agents and one Assistant in Cotton Adjustment, one Office Secretary and five stenographers. It was regretful that we had to lose Mr. J.A. Waldron, Assistant Agent handling Poultry and Dairy work in the County and Mr. J. W. McInnes, Ass't. Agent handling 4-H Club Work in the County. They have been replaced, however, by men whom we feel are very capable and should be able to handle the responsibilities placed upon them.

##### (2) General Policies

It will be the intention of the Agent the coming year, to cooperate with all related agencies and give as much time and assistance as possible to the newly organized Divisions such as Rural Rehabilitation and Rural Resettlement. Relationship with these and other agencies to date, have been most gratifying.

##### (3) Procedure

The Program of Work will be most carefully planned by the Extension Workers in the County, then presented to the Maricopa County Farm Bureau for their careful consideration. It is planned for this year, that the Program of Work will be carried out by each Director, to the Farm Bureau Locals and thoroughly discussed before asking the County Board of Directors to make the final approval, in this way, we feel that many new ideas tending to strengthen the Program, can be brought about. The Program of Work can then be presented for the final approval of the Director of Extension Service and President of the University of Arizona before presenting it to the County Board of Supervisors.

## PROGRAM OF WORK

### (1) Factors Considered and Methods used in Determining Program of Work

The Program of Work will necessarily be built around the present Agricultural Adjustment Act. During the past year, we feel that the major projects in the County have been continued and in most instances, much more far-reaching results have been obtained than anticipated. This was primarily due to the fact that concentrated effort was placed upon them, while many of the minor projects were given very little attention. It will be our plan the coming year, as it has been during the past year, to draw on the Experiment Station and the Federal agricultural employees located within our State, to assist in every way possible to keep those projects that are of most importance, in as good or better shape than they have been in the past.

### (2) Project Activities and Results

Each member of the County Agent's staff will be delegated a definite responsibility as has been previously practiced, the Agent being responsible for those projects that deal with general crops, Assistant Agent O'Dell, Horticultural projects, Assistant Thompson, Poultry and Dairy Projects, Assistant Draper, 4-H Club Work and the Assistant in Cotton Adjustment responsible for the Agricultural Adjustment Administration cotton program. It is felt that with the amount of work that has been carried on through this office during the past year, that the regular office staff of Office Secretary, Mrs. Martha J. Boggs, Chief Stenographer, Mrs. Jean Eivar and Stenographer-Clerks, Iris Dartt, Gwendolyn Gurtler, Mary Benson and O. L. Davis, have done an exceptional piece of work in keeping up with the additional responsibilities that have been placed upon them.

Conferences are held weekly by representatives of the County Agent's office, at which time activities of the previous week and plans for the coming week are discussed, in this way, giving each member of the staff an opportunity to keep in close contact with what the others are doing in their respective line of the work.

During the past year, the Experiment Station of the University of Arizona has seen fit to maintain Mr. Karl Harris, Irrigation Assistant of the U. S. Bureau of Agricultural Engineering in the County, to carry on irrigation experimental work and M. F. Wharton, Assistant Horticulturist of the University of Arizona and Mr. E. O. Foster, Assistant Agricultural Chemist. These men have been most helpful along with other members of the Experiment Station of the University of Arizona who are called in to assist in carrying out our projects. Representatives of the U. S. Department of Agri-

culture at Sacaton, particularly Mr. C. J. King and Mr. T. R. Richmond have been most helpful and cooperative.

#### AGRICULTURAL ENGINEERING

##### Project #1 - Alkali Reclamation

This project has ceased to be a major project as it is only occasionally that an individual has a small spot or more located in a 40 acre field of not over one acre in extent, that requires some method of reclamation. It is estimated that during the year, some 15 growers have been assisted in taking care of these alkaline spots.

##### Project #2 - Fertilization Practice

A cooperative experiment on fertilization of sweet potatoes was arranged with Mr. C. T. Sharp of Scottsdale and under the direction of Mr. M. F. Wharton, Assistant Horticulturist of the University of Arizona. Four different commercial fertilizers were applied to three different plantings of sweet potatoes. On the earlier plantings, practically no difference was noted in the potatoes harvested from various plots. A check will be made later on later plantings and it is hoped that some results which may be beneficial to potato growers will be obtained.

Assistant Agent O'Dell spent considerable time during the year accompanying Mr. Wharton in checking up on fertilizer plots on various vegetables throughout the Valley. A report on results obtained from these plots, will be made as the crops are harvested.

Assistant Agent O'Dell cooperated with Mr. Wharton in planning a variety planting test plot of blackberries at the Mesa Farm. Fourteen varieties were planted and during the coming year, results of yield and individual plant behavior will be checked.

During February, Mr. McGeorge spoke to 50 citrus growers at the Madison School on Fertilization of Citrus.

During October, Mr. Wharton spoke to the Japanese Association on fertilizers for vegetable crops.

During the year, 68 growers of various crops, specially citrus, were given advice on fertilization programs for the year.

##### Project #5 - Irrigation Practice

During the year, soil samples were taken whenever requests came in for the same, from growers of any crop. These were turned over to the Chemist for analysis and recommendations, based on this analysis, made as to the proper use of irrigation water.

During the past year, through E. Osborn Foster, Assistant Agricultural Chemist of the Branch Agricultural Chemistry Laboratory located in conjunction with the County Agent's office, some 390 soil samples, 275 manure and guano samples, 222 water samples and 61 miscellaneous samples, as well as 15 commercial fertilizers, were analyzed or a total of 961 determinations. It is estimated that the value of this service, if done by a commercial laboratory, would be approximately \$11,243.

A total of 89 growers were given assistance in the application of irrigation water, particularly with regard to obtaining better water penetration.

#### Pima High Yield Club

This project was originally set up to have for its purpose, to improve the quality and increase the quantity of Pima cotton produced in the Salt River Valley. For the year of 1934-35 there were 26 members that completed their records. At the annual meeting which was held on March 29, 1935, it was brought out that the average yield for 1932 was 264 pounds per acre, in 1933 - 307 pounds per acre and in 1934, 378 pounds per acre, an increase of 71 pounds over 1933 and 114 pounds over 1932. The gathering of this last year's information was done primarily by H. C. Heard, Acting Extension Crops Specialist, assisted by the Agent and Dr. George W. Barr, Extension Economist of the University of Arizona.

Mr. C. J. King, Superintendent of the Federal Station at Sacaton and Dr. R. S. Hawkins, contributed materially to the annual meeting by delivering papers on methods of production of quality cotton.

The most outstanding factor of the reasons why these increased yields have been obtained, lies primarily in the fact that 22 out of the 26 cooperators that completed that work, had 5 feet or more of water penetration in the soil previous to planting their cotton.

This year, 28 farmers are keeping records and through Mr. H. C. Heard, at that time Acting Extension Crops Specialist and Mr. Karl Harris, Irrigation Assistant of the U.S. Department of Agriculture, assisted by representatives of the County Agent's office, took levels on each of these fields and obtained soil moisture samples from each field to a depth of five feet. This information, when compared with the yields from each field this coming year, should be most interesting.

#### CROPS

##### Project #6-Pure Seed

Certified Sorghum In cooperation with the Farm Bureau-Farm Union Sorghum Seed Certification Committee, the Agent assisted them, because



of drought conditions in the Central and Middle Western states, to certify to some 1605 acres of sorghum. The farmers capable of inspecting fields were taken to the University Farm where a number of the sorghum grains were growing and shown methods of inspecting each variety. Through this committee, some 1,782,500 pounds of hegari, 456,500 pounds of milo, 61,000 pounds of Fargo Straight Neck and 50,000 pounds of Wheatland Maize were approved and tagged, or a total of 2,350,000 pounds of sorghum grain. Through this effort, the growers were able to receive an average of \$1.50 instead of the regular feed grain price of about \$1.30 per hundred for their seed.

Registered Sorghum Through the Arizona Crop Improvement Association, assisted by Mr. Ian A. Briggs, this office inspected 735 acres of hegari that met the requirements of registration and 40 acres of Double Dwarf Maize which met the requirements of registration.

Vaughn Barley One hundred and twenty acres of Vaughn Barley was inspected and found that it would have met the requirements for registration had it not carried over 1% smut.

Sugar Beet Seed Assistance was rendered Mr. Harry Elcock of the Sugar Manufacturing companies to locate a sufficient number of growers to plant about one thousand acres of sugar beet seed for the purpose of producing seed for the coming year. Last year there were only 12 acres of this seed produced in the County, though these 12 acres produced better than 3000 pounds of excellent seed per acre.

Soybeans Variety tests on soybeans were carried on by cooperator J. G. Boswell Cotton Company and the Agronomy Department of the University of Arizona who we were able to sufficiently interest to carry out a much more complete and adequate test on the University Farm at Mesa. The variety test carried on by the Boswell Company did not make seed though several varieties planted by Dr. R. L. Matlock of the University of Arizona appear to have some real possibilities for the production of seed for oil mill purposes.

Acala Cotton Seventy acres of first generation, yellow tag seed produced in San Joaquin Valley, were planted by C. O. Vosburgh of Buckeye. These 70 acres were rogued and found to be sufficiently isolated to meet registration requirements. It was through the cooperation of this office that some five tons of this Acala seed was obtained through the Bakersfield Pure Seed Committee.

The County Agent's office made it possible for the Western Cotton Products Company and County Agent in Pinal County to plant some 300 acres of this seed for seed production purposes, in Pinal County as our Maricopa County Pure Seed Committee were able to furnish proper credentials which the Bakersfield Seed Organization requires before turning the seed over to outside organizations.

SxP 30 seed Six hundred and twenty acres of SxP 30 cotton were rogued which should give us approximately 400,000 pounds of pure planting seed. This last season, arrangements were made through the Maricopa County Farm Bureau Pure Seed Committee to expand the acreage planted to SxP30 from about 600 acres up to 2000 acres. This was done on the approval of the U.S. Department of Agriculture, Bureau of Plant Industry and every grower who planted the seed, signed an agreement to return all seed that met the requirements for pure seed, to the Maricopa County Farm Bureau Pure Seed Committee and that which would not meet pure seed requirements, would be oil milled. The gins also signed this agreement and are cooperating 100% in the program.

Every grower of SxP30 agreed to an assessment of 50¢ per acre to take care of the cost of supervision of picking and ginning, to see that none of this seed was misplaced. Plans are now under way for further expansion in acreage of this cotton in the County. If the reports from the mills in the East who have been using SxP30 are as favorable as some reports which we now have, immediate steps will be taken to distribute the seed which is now in the hands of the Pure Seed Committee on an equitable basis to all growers.

Pima Seed Two thousand and forty-six acres of Pima cotton were inspected and seed saved for commercial purposes. Three hundred and forty-three acres were carefully rogued for foundation purposes. This should give us adequate planting seed for 1936. Roguing of both SxP30 and Pima was carried on by the following individuals: H. C. Heard, Extension Specialist in Crops and Irrigation of the University of Arizona; Dr. R. S. Hawkins, Agronomist; R. L. Matlock, E. H. Pressley; A. T. Bartel; E. O. Foster; C. J. King; T. R. Richmond; Gordon Smith; Claude Hope; Harold Fulton; Mr. Gordon; J. H. O'Dell; Karl Harris and the Agent.

Chilean Alfalfa On June 19 and 20, H. C. Heard, Ian A. Briggs and the Agent inspected the alfalfa fields that had made application to produce registered chilean alfalfa seed for the 1935 crop. Besides the fields which were registered the year before, two new fields were passed, representing 320 acres, giving us a total of 1488 acres from which to obtain registered seed for the 1935 crop, representing 19 growers. The yield this year was about half of the average crop and it is estimated that only about 200,000 pounds of seed will be registered. In each case, the Directors of the Chilean alfalfa seed growers association acted as field inspectors, inspecting threshing machines and placing field tags on the sacks after they were threshed. Representatives of the County Agent's office inspected the cleaners before cleaning alfalfa seed and tags and seals were placed on the bags, if they met the requirements after analysis by the Agronomy Department of the University of Arizona.

Two meetings of the Chilean Alfalfa Seed Growers association were attended by the Agent and Ian A. Briggs, Associate

Agronomist, in assisting them to work out a more adequate method of marketing their seed. An attempt was made to obtain a higher price for registered seed over and above the Common No. 1 grade of alfalfa seed.

Flax Seed Considerable time was spent on several occasions in company with Mr. H. C. Heard, in inspecting flax seed fields to obtain cultural practice information as well as to determine the most satisfactory means of harvesting. Some 4000 acres of flax seed were planted in the County this past fall and it was hoped that it would be satisfactory as it would give the County one more adaptable crop to produce.

Considerable publicity was given previous to planting, warning growers as to the dangers that they would be confronted with if they planted flax in weed infested fields. This was unheeded in several cases, thereby greatly reducing yields. Notes were taken on the observations and it is hoped at a later date, that Mr. Heard will be able to publish his final findings on the flax situation in the County.

Project #7 - Better Alfalfa Hay

Assistance was rendered the Federal Hay Inspection Service by this office during the year as the former Inspector had failed to make a satisfactory financial statement and report to the Hay, Feed and Seed Division in Washington, D. C. Mr. Jas. A. Leroy spent some two weeks in the County in an effort to straighten out the records and upon the recommendation of the hay trade and this office, Mr. Preston Brookes, very responsible and capable hay grader, was appointed to succeed Mr. E. H. Phillips. Since that time, very satisfactory results have been obtained and the old indebtedness removed.

Annual Field Crops Day

On October 22, the Annual Crops Field Day was held at the University Farm, at which time over 100 farmers were in attendance. Dr. R. S. Hawkins, R. L. Matlock, Ian A. Briggs and E. H. Pressley of the University of Arizona and Karl Harris, of the U.S. Department of Agriculture, explained their experimental work which is being carried on at the Farm.

Project #10 - Variety Spinning and Ginning

In that during the past 16 years, since SxP30 cotton was isolated at the Federal Experimental Station at Sacaton and that Federal agencies, as well as the University of Arizona, Agronomy Department have been carrying on small variety tests and in that SxP30 has been earlier in maturity and has averaged approximately 20% more in yield

than Pima, it was felt by a number of Pima growers that it would be desirable to carry out a larger and more complete planting of these two varieties so that they might satisfy themselves as to the comparative differences in these two varieties of cotton. Arrangements were made for some 26 acres of these two cottons to be planted, 13 acres of each variety, 16 rows of SxP30 and 16 rows of Pima, repeated across the field until we had eight 16 row duplicates of each variety. The first picking of these plantings has been completed and results showed that the SxP30 produced 3700 pounds of lint cotton and Pima produced 2330 pounds, a difference of 1370 pounds in favor of SxP30. Using the acre basis, SxP30 had a yield of 280 pounds of lint while Pima only had 180 pounds per acre. Because of this difference in yield and of the fact that it is earlier in maturity, it is apparent that SxP30 may have considerable promise and to a large extent, replace Pima in the years to come, in this County. (Hold publicity on this until final results are obtained.)

## HORTICULTURE

### Project #11-Citrus Bud Selection

During April, Assistant Agent O'Dell assisted Mr. D. W. Albert in checking over the Valencia orange trees in the Omer McCullough grove near Mesa, for trees of good type from which buds might be obtained. This was the third check of the grove and a record has been prepared of the condition of the fruit found on the trees during these three years and will be kept on file in this office for the use of anyone interested in Valencia buds.

During November, the Assistant Agent checked over the J. C. Bowman grove of Naval oranges for the same purpose and completed a three year project on this grove. A record of good trees in this grove has been prepared and placed on file. This project was instigated three years ago at the request of the Arizona Citrus Nurserymen's Association, in an attempt to provide the best budwood obtainable for the members of the Association.

### Project #12-Pruning

During January, a pruning demonstration was held at the A. G. Bailey ranch near Phoenix, with Mr. Fred Draper, Extension Horticulturist demonstrating the proper methods of pruning older apricot trees. Twenty-four people were present at the demonstration.

During January, Assistant Agent O'Dell spoke to members of the Phoenix Garden Club on pruning roses and general ornamental shrubs. Thirty members were present. A similar talk was given to the Peoria Club and to the Sierra Vista Garden Club at later dates.

Project #13-Pecan Propagation

During January, a demonstration of Propagation of Pecan Trees was held at the M. D. Ewing ranch North of Glendale, with Dr. Finch giving a talk on irrigation and cultural practices which would tend to prevent pre-harvest germination and non-filling of nuts. Mr. Fred Draper gave a demonstration of pruning young trees. Thirty-five persons were present.

During April, three demonstrations of grafting and budding pecans were held in the Mesa, Glendale and Madison districts respectively. At the Mesa and Madison districts, the demonstrations were given by Mr. Draper and the one at Glendale, by Assistant Agent O'Dell. Thirty-three persons were present at the three demonstrations.

Assistant Agent O'Dell, assisted by Mr. Draper, demonstrated budding and grafting pecans to two classes of the Tempe High School. At a later date, a check with Mr. Draper, on the buds and grafts which had been put in during the demonstrations, showed that fair results had been obtained from the grafts but the results from budding were very unsatisfactory.

During October, the Assistant Agent spent one day in the Yuma District in checking over the experimental work which is being done in that district by Dr. Finch.

During the year, 15 growers of pecans were given assistance in budding and grafting.

Project #14-Date Propagation

During May, an Offshoot Removal and Planting Demonstration was held at the Tempe Date Farm with Mr. D. W. Albert and Mr. Robert Hilgeman explaining the proper methods of removing and planting offshoots and also of pollinating and processing dates. Forty-five people were present.

Eighteen growers of dates were assisted in pollinating their dates and a great number of the bulletin on Home Curing of Dates, was distributed during the year.

Project #14.1-Citrus Nursery Practice

Assistant Agent O'Dell attended meetings of the Citrus Nurserymen's Association and acted as Secretary at each meeting. Eight meetings were held during the year.

In February, a Citrus Nursery Tour was arranged and held, during which, all nurseries of the Association members were visited and comparisons made of the different practices of each grower.

### Sweet Potato Hot Bed

The County Agent's office assisted Mr. Wharton in installing an electric cable for heating a potato seed bed at the C. T. Sharp ranch at Scottsdale. The bed was prepared by Mr. Sharp and the cable and thermostat furnished by Mr. Wharton. Two 60 foot cables of 450 watt capacity, were laid in the bottom of the bed which was approximately 10 inches deep. The cables were laid 8 inches apart and covered with 4 inches of soil, then the potatoes, at the rate of three pounds per square foot, were placed on top of this soil and covered with approximately 3 inches of soil. The entire bed was wet down at this time and covered with tar paper. Adjoining the part of the bed in which the cable was installed, was a common manure heated bed which was used for comparison. The installation of the cable was completed on April 5 and the current immediately turned on. At the end of the third day, the soil temperature had been built up to 85°F. The thermostat was then gradually turned down and all electricity was turned off at the end of the third week.

Plants were pulled from the electrically heated bed in 30 days from the time of planting, whereas plants from the manure heated bed, planted 30 days previous to this, had required 60 days to furnish plants. From the 80 square feet of heated plot, 4000 plants were pulled on the first pulling and 3800 plants two weeks later. So few plants were obtained from the other end of the bed that no check was kept on the number.

The cost of materials for this installation was \$7.20 for the cable, \$11.00 for the thermostat. These materials were furnished by Mr. Wharton. The grower estimated that the cost of electricity was approximately \$5.50 for the entire three weeks. It is planned to carry on this experiment during the next year.

### Orchard Heating

During May, a meeting was arranged at Madison School, at which time, Mr. Schoonover of the California Extension Service spoke to 200 citrus growers on orchard heating and demonstrated the various types of heaters.

### Flower Show

During April, Assistant Agent O'Dall assisted in judging the entries at the Buckeye and the Phoenix Womens Club Flower Show.

DAIRY

Project #22-Dairy Herd Improvement

The Circuit Testing Division of the Maricopa County Herd Improvement Association increased very materially during the year, between two thousand and twenty-five hundred cows completing the year's records. The Regular Testing Division of the Association practically held its own. Sixteen herds with 641 cows, producing an average of 8171 pounds of milk and 315.3 pounds of butterfat, completed the year's record July 1, 1935, being about 86 pounds of milk less than 1934 and 9 pounds of butterfat more than in 1934.

Feed costs averaged 71.91 cents per cow, which was 49% more than in 1934. The average return was \$65.47 per cow over the cost of feed.

Twelve herds completing the years record, qualified for Certificates of Honor offered by the National Dairy Association for herds producing 300 pounds or more of butterfat.

The Circuit Testing Division of the Herd Improvement Association grows in popularity because of its cheapness, costing the farmer a total of 6¢ per cow per month and because of the fact that if care is taken in weighing and sampling on the part of the owner, a very satisfactory and practical record is obtained. No attempt is made to get feed costs under this plan, simply a milk and butterfat record being obtained. There are now 1309 cows on test.

The Board of Directors during the year, worked out a record card for the Circuit Testing Division of the Herd Improvement Association, Provision was made on these cards for age and breeding records for each individual cow, as well as a six years production record. In this way, the owner can compare quickly, one years record with the previous or any particular month with the same month of the preceding year. This record can accompany the cow when sold. These are proving to be very popular with the dairymen and another practical feature of this division of the work.

The Board of Directors, in cooperation with S.C.Minor, tester, built a trailer which Mr. Minor has equipped with a complete testing outfit, water baths and other equipment used in running butterfat tests. In this way, he is able to run the test on the ranch of the member of the Circuit Testing Division and give him his record immediately.

The Annual picnic of the Association was held at the U.S.Indian School, Phoenix, on July 20 and was attended by about 200 members and friends. Mr. J.S.Malone, Market Milk Administrator for the Phoenix Market and Prof. R. N. Davis of the University of Arizona, appeared on the program.

Project #22a-Dairy Farm Management

The County Agent's office assisted cattle buyers from Mexico in locating about 60 head of springer heifers and young Holstein cows. This office from time to time has advised with dairymen regarding their individual dairy farm management problems and emphasis has been placed upon a balanced farm program featuring the growing of feed necessary to support the milking herd and young cattle, without which, it is very doubtful if any dairy enterprise can succeed and it has been suggested that a cash crop be included in the farm management program, as well as incidental crops providing family existence and for family income, such as cotton and poultry.

Project #23-Disease Control (Bang's Disease)

The County Agent's office has cooperated with the State Veterinarian's office in promoting the Bang's disease control project being carried on under the Federal program for the eradication of this disease. The work of this office, of course, is entirely educational. It is estimated that between 40 and 50 names of dairymen applying for this work, have been turned in to the State Veterinarians office during the year.

The last report from the State Veterinarians office on reactors showed about 14% positive to the test. This is about in line with the national results so far.

The County Agent's office bled the herds of five dairymen during the year for the purpose of determining the extent of infection of Bang's disease in the herd, preliminary to having the herd placed under Federal supervision.

Project #24-Better and Proven Sires

Work on this project during the year has consisted mainly of cooperation with the Bureau of Dairying of the U.S.D.A. in obtaining data on breeding histories of herds in the County that have been in the Herd Improvement Association for some time. A study of the herd of James Painter, of Tempe, has been completed. Work is now in progress on the Mission Ranch herd. Mr. Painter's herd has been in the Association for ten years and the Mission Ranch herd, for about six years.

Roy Jones, Extension Dairyman from the Bureau of Dairying, U.S.D.A. spent one day in the County helping with this work. This is part of the program of the Department of Agriculture to locate meritorious herd sires and other outstanding breed strains. We hope to continue this study in five or six herds in the County.



### Project #19-Feeding Beef Cattle

On Friday, March 8, the Annual Feeder Cattlemen's Tour was held. Assistance with this tour was given by C. U. Pickrell, Extension Livestock Specialist and E. B. Stahley, Animal Husbandman of the University of Arizona. The University feed pens were inspected as well as three other feeder cattle pens visited.

On July 8, Mr. E. B. Stanley, Animal Husbandman of the University of Arizona, assisted by the Agent, held the Annual Feeder Cattlemen's Day at the University Farm. Much interest was manifested in the demonstration as 250 interested cattlemen attended.

### POULTRY

#### Project #30- Poultry Improvement

As noted in the 1934 Annual Report, the Arizona Accredited Hatchery Association was disbanded and the Arizona Poultry Improvement Association formed to take its place. The County Agent's office has cooperated during the year with Clyde F. Rowe, Poultry Specialist of the University of Arizona in carrying forward the program outlined under the auspices of this association. This consists mainly this year of testing of flocks of hatcherymen and breeders, for pullorum disease. This work was carried on by Mr. I. E. Cowart, in cooperation with the FERA. Mr. Cowart spent his entire time in testing flocks in this county and in Pima County. A low percentage of reactors was reported, running below 5%, which compares very favorably with the record obtained when this work was started three or four years ago when the percentage of reactors ran around 25%. This indicates that where testing is carefully carried on over a period of years, that the method is effective in tending to eliminate the disease.

A series of nine poultry meetings was held during the last of February and first of March, at which, Clyde F. Rowe, Poultry Specialist discussed baby chick management and other timely matters of interest to poultrymen as part of the poultry flock improvement project. Considerable time of the Agent during the year was spent in aiding individual poultrymen with their poultry management problems.

#### Project #30a-Poultry Disease Control

Considerable time of the County Agent's office was devoted during the year to assisting poultrymen with their poultry disease problems.

This office has found the new Veterinary Department of the University of Arizona, of which Dr. William Pistor is head, a great help in diagnosing poultry diseases. When a disease is properly diagnosed, treatment is easily indicated. Dr. Pistor also helped materially in diagnosing the trouble in disease outbreaks in several flocks of turkeys during the year. During the month of June, eleven meetings were held in different communities of the County, at which, Dr. William Pistor of the Veterinary Department and Clyde F. Rowe of the University of Arizona, discussed poultry disease control in detail, special emphasis being placed on infectious bronchitis and general farm management practices to prevent and control diseases. These meetings were attended by about 200 people and considerable interest was manifested.

#### MISCELLANEOUS

##### Project #8-Weed Eradication

For several years, individual growers and organizations such as the Maricopa County Farm Bureau and Farmers' Union and this office have been requesting the Experiment Station of the University of Arizona to carry on some experimental work to determine the most economical means of control of White Horse Nettle and Bindweed or Wild Morning Glory. During the past summer, through the cooperation of the Director of the Experiment Station and the Extension Director of the University of Arizona, a cooperative project was drawn up whereby the Plant Pathology Department of the University, in cooperation with the County Agent's office, will carry out such experimental and demonstrational work necessary to give us the required information.

Two experimental plots were laid out and a program arranged. One plot, consisting of a piece of land badly infested with White Horse Nettle was selected in the Chandler District and another which was overrun with Bindweed, Nut Grass and Bermuda Grass, was selected in the Cashion District. Owners of the property in both cases have agreed that the land will be set aside for experimental purposes as long as necessary.

A new spray outfit with a special boom for handling sulfuric acid, was ordered by the Experiment Station and delivered to the County Agent's office in Phoenix. This machine was set up and gotten into operation by Dr. Streets and Mr. Karl Butler of the Department of Plant Pathology, assisted by the County Agent's office. Spraying with sulfuric acid and sodium arsenite and calcium chlorate was carried on on each plot. In addition to this, the jar method of killing out individual plants through the use of a weak solution of arsenite, also through the use of Carbon Bisulfide, was outlined

for each plot. During November, a check of these plots was made and it showed that no results had been obtained on the White Horse Nettle from spraying with straight Sulfuric acid. Sulfuric acid and arsenic spray had killed the roots down to a maximum depth of 8 inches. The Carbon Bisulfide application was also very effective. Chlorates had killed the tops of the plants but had not penetrated the roots to any great depth.

On the bindweed plot, the acid-arsenic spray had penetrated the roots to a depth of from one to four inches. The tops were completely killed. The tops of nut grass were killed by the spray but apparently the underground parts were not affected. The application of Carbon Bisulfide on bindweed did not give satisfactory control. A further check of these plots will be made during the spring and a report made at that time.

Arrangements have been made to flood irrigate a small plot in the White Horse Nettle area at Chandler, the Salt River Valley Water Users' Association furnishing the water and the labor necessary in carrying out this part of the project is furnished by the County Agent's office.

Considerable requests were received from farmers in all sections of the Valley for help in weed eradication but since no authentic information on control was available, no help could be given.

#### Project #15-Insect Pest Control

Thrips Control During January, Mr. A. E. McGregor of the U. S. Bureau of Entomology, visited the Valley at the request of the County Agent's office and outlined dusting experiments for thrips, to be carried on during the spring months. Two plots of Navel oranges were selected, one of older trees at the Val Vista ranch Northeast of Mesa and one of younger trees at the Col. Bumstead ranch, West of Phoenix. Sulfur for this experimental work was donated by the San Francisco Sulfur Company and 3,000 pounds were applied to the two plots. The dusting was done by the grower under the direction of Mr. McGregor and all checking on results obtained was done by Mr. McGregor and the Assistant Agent O'Dall.

The report by Mr. McGregor during November, showed that very good control of thrips had been obtained, especially when the first dusting was applied as early as March 20. On the Col. Bumstead ranch final results show that on the treated plots, an average of 9.17% of damaged fruit was found as against 36.5% which was damaged on the untreated plots. At the Val Vista grove, a check showed that on the early treated plots, only 4.11% of the fruit was damaged, on the later treated plots, 18.67% and on the untreated plots, 61.5% of the fruit was damaged by the insect. Mr. McGregor believes that the

first dusting in both cases was delayed a week or ten days too long. This was unavoidable this year, since high winds at that time prevented any effective dusting.

Grasshopper Control During May, 150 tons of bran and 30 drums of Sodium Arsenite were received from the Government for free distribution in the County. The materials were stored in the warehouse of the Associated Dairy Products Company in Glendale and in the old Tempe Pumping Plant East of Tempe, on the Mesa highway. Transportation charges were paid by the Arizona Commission of Agriculture and Horticulture. Two mixing stations were first opened at the above mentioned places but after a short time, they were both discontinued due to the fact that no requests for poison were had. Later, the one plant was opened at Tempe and kept open only a short time and then discontinued for several weeks and the latter part of August, it became necessary to open this station again and the mixing continued at that place until November 1. During that time, 3,890 sacks of wet mash were distributed to growers and applied to 24,026 acres. A man was kept at the Station at all times to supervise the mixing but growers were asked to furnish labor for the actual mixing. Stencilled bags for the mixed material were furnished by this office.

The formula used was 100 pounds of bran, one-half gallon of liquid sodium arsenite and ten to twelve gallons of water, depending upon the dryness of the bran. It was recommended that 20 pounds of this wet material be applied per acre. Excellent results were obtained, especially where some attractant such as molasses, meat scraps dried buttermilk or cottonseed meal was added to the mixture.

Salt Marsh Caterpillar Following the suggestion of Mr. Blackledge, County Agent in Yuma County, growers were advised to use the regular mixture for the control of the Salt Marsh Caterpillar in vegetables and alfalfa. A grower in the Gilbert District reported that the mash was very effective in controlling these pests.

Approximately 50 tons of the bran are still available and will be used next year in combatting an outbreak of grasshoppers, cutworms or crickets.

Red Scale During May, inspectors of the Arizona Commission of Agriculture and Horticulture found quite an infestation of Red Scale in the W. L. Smith citrus grove North of Phoenix. Through the cooperation of Mr. Smith, the State Entomologist's office and Department of Vocational Education, the County Agent's Office arranged a meeting to be held at the Smith grove, at which time, all interested people were shown the trees which were actually infested, and told of the danger of this pest and what was being done to combat it. Mr. George, State Entomologist, gave a talk on the work which is being done along this line to the 175 people who were present.

Insects Observed During the year the following pests were observed on various crops and assistance rendered in their control:

Ground beetles on vegetables; Salt Marsh Caterpillars on vegetables and alfalfa; Crickets on vegetables; Thrips on citrus, roses, melons, cucumbers and citrus fruit; Cutworms on cotton and ornamentals; Seed Corn Maggot on cotton; Aphis on lettuce, Irish potatoes, ornamental plants and cantaloupes; Borers in citrus; Flea beetles on grapes; Red Scale on citrus; Corn earworm on citrus and maize; Soft Brown Scale on citrus; Cockroaches in dwellings; Peach twig borers in deciduous fruit trees; Webworms on cotton; False Chinch Bugs on grapes, ornamentals, dwellings and watermelons; Termites in dwellings and lawns; Grape-leaf Skeletonizer on grapes; Potato stalk borer in Irish Potatoes; Cotton Flea-hopper on cotton; Flat-headed apple tree borer in deciduous fruit trees and ornamentals; Cicadas in shade trees; Corn stalk borer in maize; Bostrichid in citrus and C.C. Scale on ornamentals and citrus.

Project #23-Disease Control (Plants)

Citrus Mottled Leaf In cooperation with Mr. Kinnison, Mr. McGeorge, Mr. Albert and assisted by Assistant Agent O'Dell, an experimental plot was arranged for in the Arcadia District to use fertilizers and various chemicals in an attempt to control mottled leaf of citrus. The materials were furnished by the Experiment Station and the actual application supervised by Mr. H. C. Heard. A check on this plot during November showed no outstanding results but it is hoped to continue the Experiment through two more years and at that time results should be obtained.

Texas Root Rot A number of growers of ornamental plants and shade trees were advised in the use of Ammonium Sulfate for the control of root rot and in cases where the disease had not gone into advanced stages, excellent results were obtained.

Chlorosis and Rosette Very good results in correcting chlorotic condition of ornamental plants have been obtained through the use of iron sulfate applied to the soil and through the trunk application of the same material to Eucalyptus trees.

Diseases Observed Eighty-four growers were given assistance in controlling plant diseases during the year. The following diseases were observed: Dry Root Rot on citrus; Mottled leaf on citrus; Decline on Eucalyptus; Mildew on roses, grapes and verbena; Damping-Off on cantaloupes and cotton; Nematodes on fan palms, figs, cantaloupes and ornamentals; Crown gall on plums, pecan and apricot; Fusarium wilt on watermelons; Root Rot on Chinese Elm, umbrella and ornamental shrubs; Scaly Bark on citrus; Little Leaf on plums; Scab on apricots; Yellows on tomatoes; Rosette on pecans; Fire Blight on pyracantha, Cottony Rot on Watermelons; Gummosis on citrus and apricots, Slime flux on plum; Heart rot on ornamental palms and Side Rot of lettuce.

Project #16-Rodent Control

The only work done on Rodent control work in the County during the year was through direct office calls and farmers given information as to proper use of the poison and the issuance of poison for the control of rodents. Fifteen hundred and eight individuals were assisted in this program, treating 22,620 acres with 3000 pounds of poison.

4-H CLUB WORK

Project #29-Boys and Girls 4-H Club Work

Mesa Citrus Fair In connection with the Mesa Citrus Fair, six 4-H Club judging teams competed in the annual contest. This contest was held jointly with the Vocational and Agricultural Departments of the State. This year's contest, the first annual event of this nature, seemed to be a worthwhile addition to junior agricultural events in Maricopa County. Mr. Tom Watson, 4-H leader at Tempe Union High School represented the County Agricultural Agent's office at a meeting following the contest at which rules were set up governing the 1936 contest.

Ninth Annual 4-H Club Fair Thirty seven hundred and twenty-nine exhibits in agriculture, home economics and health were displayed in the Ninth Annual 4-H Club Fair held at the State Teachers College at Tempe, Arizona, during April. An innovation was a polo match presented as a demonstration by the Roosevelt 4-H Club Horse Club. This Club was organized and carried through by Mr. T. C. McReynolds, Roosevelt district rancher, assisted by L. D. Hamman, Laveen rancher. Tempe service clubs presented a Blue Ribbon Banquet to 100 first prize winners at the Fair. Prizes other than ribbons furnished by the Agricultural Extension Service were limited to ribbons and copies of the book "Holstein-Friesian History" presented by the Holstein-Friesian Association of America, \$20.00 in prize money by the Arizona State Holstein-Friesian Association, ribbons and medals by the Jersey Cattle Club, baseball pennants offered by the Tempe Chamber of Commerce and miscellaneous small items.

County 4-H Club Committee The County 4-H Committee, consisting of some 26 business and professional men of the Salt River Valley, headed by Chairman Henry Stevens, Phoenix attorney, limited activities to an individual nature with the exception of tentative plans for a 4-H Club Jubilee in September 1935.

Cooperation of Service Clubs 4-H Club organization presented programs before the Phoenix Hiram Club and the Phoenix Kiwanis Club and Lions Club and Hiram Club of Mesa, during the year.

Radio Six programs were presented by the Maricopa County 4-H Club organization over KTAR. Eight Programs were presented over KOY by the Rohrig Leadership Club.

State 4-H Club Week Seventy-eight club members, parents and leaders made the annual trip to the University Club Week for the most part, paying their own expenses of \$2.30 each.

Leadership Training Three Leadership Clubs were organized during the year in these districts: Tempe High, Rohrig and Phoenix. The most outstanding work was done by Rohrig Leadership Club which carried to completion, two projects. This Club assumed the responsibility for getting data and preparing for the Sears-Roebuck contest. The report submitted placed Maricopa County first in Arizona and second in the Western States Division of this National contest. The second project was development of radio programs. Eight programs were presented over KOY and two over KTAR by this club.

Collegiate Club During the year, through the efforts of Erna Ruth Wildermuth and Robert Birchett, both formerly National Club delegates, a Collegiate Club was organized at the Arizona State Teachers College.

Buckeye Junior Fair As a contribution to rural youth, the Extension Service office aided in the promotion of a Junior Agricultural Fair in Buckeye early in April. Some 400 exhibits were prepared by boys and girls of Buckeye Valley. Mr. Kellogg, superintendent of the Fair informed the County Agricultural Extension office that due to the enthusiasm promoted by this activity, a vocational agricultural class was installed at Buckeye High School to begin operation in September 1935.

Bulletin File The 4-H Club bulletin files have been revised and reference manuals consisting of government bulletins, bound together, have been prepared for reference use by the leaders.

County 4-H Club Egg Show The County Egg show was held November 23 with one entry. LeRoy Gavette won first place with Buff Orpington eggs. This entry was forwarded to the 4-H Club Congress in Chicago.

National Dairy Show October 9 to 20 was spent by Assistant Agent Draper in taking the dairy judging team and a dairy demonstration team to the National Dairy Show at St. Louis, Missouri. The Judging Team placed 11th out of 20 for all breeds. The demonstration team placed 7 out of 11.

## AGRICULTURAL ADJUSTMENT ACT ACTIVITIES

### General Agricultural Adjustment Act Activities

Six general meetings were held over the County as arranged by the Maricopa County Farm Bureau, Salt River Valley Water Users' Association, Arizona Milk Producers Association, Roosevelt Irrigation District and Roosevelt Water Conservation District, for the purpose of educating farmers relative to the value of the Agricultural Adjustment program and its benefit to farmers. Most splendid cooperation was obtained from these meetings. Agricultural leaders in the County took a very active part in presenting portions of the program and many resolutions, wires and letters were sent to our representatives in Congress, urging their support of the Agricultural Adjustment Act.

### Cotton Acreage Reduction

There were 759 acreage reduction contracts signed in 1934 and 1039 signed in 1935 or an increase of 280 contracts. These 1039 contracts represent a base acreage of 107,167 acres. Some 74 meetings were held in the County to assist in carrying out the cotton program during the year.

### Bankhead

Some 1647 Bankhead applications were made in the County, 1210 of these were made by growers of short cotton and 437 were made by Pima growers.

### Wheat

The 1933-35 Wheat Reduction Program is gradually being brought to a close. Out of the original 57 signers for 1933, 47 finished in 1934 and 42 finished in 1935. Thirty of these 42 have cleared Washington and the growers have received their checks. There are still 12 contracts that will have to have some further consideration. The total base acreage in these contracts is 3,521 acres and the base production is 80,458 bushels.

The 1936-39 program is now under way and some 42 wheat growers have signed applications. Tabulation sheets have been forwarded to the State Board.

### Corn-Hog Control Program

Sixty-two contracts were signed with a hog base of 8287.5. In that this is not a corn producing county, there was no corn reduction. All corn that is produced here is used for insilage purposes.



### Market Milk License

The County Agent's office cooperated with the Arizona Milk Producers Association and the Dairy Section of the Agricultural Adjustment Administration in establishing a Market Milk License in the Phoenix market. The operation of the license has been very helpful to the producers of this market where previously they received about 30% of the consumers' dollar spent for fluid milk. Since the establishment of the license in November 1934, they have been receiving from 45 to 50 cents of the consumers' milk dollar.

Mr. J. S. Malone, Market Administrator has administered the office in an impartial, effective manner. One item of interest brought out from the records of this office, is that the so-called surplus of market milk is considerably lower than producers were led to believe existed and in fact, surplus has been steadily decreasing since the establishment of the license up to July 1. It was found almost impossible to maintain established retail prices because of chiselling on the part of practically all distributors. This seems to have been the experience in practically all markets where these licenses have been in effect and is in line with amendments to the Agricultural Adjustment Act recently adopted by the Federal Congress. As a whole, the market milk license has been of great benefit to the Phoenix market and it seems safe to say that it is receiving the support of practically every producer and a majority of the distributors, bringing about a situation where it is possible to get groups together around a table to discuss their common problems and reach a solution satisfactory to a majority. This has really never been possible in the past and if the Federal Government serves no other purpose than this, the effort and cost will be more than worthwhile.

### Citrus Fruit Prorate and Marketing Agreement

Assistance has been rendered the Market Director in the Maricopa County territory, Mr. J. W. Firth and he has been furnished office space in conjunction with the County Agent's office.

### ORGANIZATION

#### Maricopa County Farm Bureau

The County Agent acted as Secretary of the Maricopa County Farm Bureau during the year and attended some 28 meetings. Two new locals were assisted in organizing, one at Avondale and one at Dysart. Mr. A. B. Ballantyne, Rural Sociologist of the University

of Arizona aided the Farm Bureau in organizing group discussion meetings on problems which now face American agriculture. Some fourteen fairly active Farm Bureau Locals are in the County at the present time.

The Labor Department of the Farm Bureau was re-organized and arrangements were made to cooperate in the Grasshopper Control Program. The Board of Supervisors were urged by the Farm Bureau to appropriate \$500.00 toward distribution of the poison bran bait.

The Farm Bureau continued to support the 4-H Club and sponsored the 4-H Club Fair held at the A.S.T.C. campus on April 12 and 13.

The Farm Bureau also supported the Agricultural Adjustment Act Amendments 100% by sending wires and letters to the Arizona delegation in Congress.

Assisted to work out problems confronting proper administration of the Acreage Reduction Program and Bankhead Act.

Two special meetings of the Farm Bureau were held at which time Mr. R. L. Blackburn, President of the California Farm Bureau and Director of the American Farm Bureau was present and gave a very interesting talk and Mr. Chester Gray of the American Farm Bureau was present at a general meeting attended by over 200 farmers, at which he gave first-hand information on the value of the American Farm Bureau to agriculture.

#### State Agricultural Adjustment Act

A statewide meeting was called by the Maricopa County Farm Bureau, at which time, the County Agent obtained copies of the California Agricultural Adjustment Act laws and presented them at this meeting. Several other meetings were held after this general meeting, at which time, Assistant Agent O'Dell presented the State Agricultural Adjustment law to the Kyrene Farm Bureau. This law was further discussed at the State Farm Bureau meeting held in January 1935. The State Farm Bureau drafted a law similar to that of the California law but it failed to pass the State Legislature.

#### State Farm Bureau

The Agent attended the State Farm Bureau meetings held in Phoenix on May 30 and 31 and meetings held on November 15 and 16, at which time, the Agent assisted the Farm Bureau in drafting resolutions affecting agriculture and also in drawing up bills that were presented to the State Legislature, namely the Agricultural Prorate Act, Fertilizer Bill and Dairy Bill.

### Farmers' Union

The Agent attended three meetings of the Farmers' Union during the year and discussed with them, the Agricultural Adjustment Act and problems relating thereto.

### Rural Rehabilitation

The Agent has acted as a member of the County Advisory Board since its inception and at each meeting, a representative of this office has been in attendance to assist in approving or disapproving loans. Assistance has also been rendered individuals making application for loans in working out farm budgets. The advisory committee has met usually, every Thursday and some 17 meetings have been attended by representatives of this office, up to date.

### Rural Resettlement

Assistance was rendered the Rural Resettlement Division in working out tentative farm set-ups for a general farm on a 40, 60 and 80 acre basis and attended several meetings to assist those in charge of the work in the State, in determining the most economical farm units.

### Maricopa County Debt Adjustment

The Agent has acted as a member of the State, as well as the County Debt Adjustment Committee. In this County, there have been some 258 applications made, representing a total indebtedness of over \$1,250,000. Up to date, the committee assisted by a most efficient Secretary, Mr. Charles Gann whom they have appointed, has closed over 200 of these cases, representing a valuation of about \$900,000 and kept these 200 farmers in their homes. The other 58 applications are in the process of being closed. There has been a scale down in this indebtedness of over \$40,000.

### Consumers' Council

Some 15 meetings were attended by representatives of the County Agent's office. A study of retail prices was made through this organization and a much more harmonious feeling toward the producers by the Consumers' Council was brought about because of activities of the Extension Service in this committee.

### Service Clubs

Talks were given by representatives of the County Agent's office before two Rotary Club meetings, one Lions Club meeting, One Kiwanis Club meeting on the Agricultural Adjustment Act and its effect on agriculture.

### Bankers' Association

The Agent attended the annual meeting of the Agricultural Committee of the Arizona Bankers' Association on February 18, at which time, Mr. Dan Otis, Secretary of the Agricultural Committee of the National Association was present and emphasized the importance of placing a farmer on an adequate budget.

### Agricultural Extension Service Conferences

Winter Conference The Annual Extension Conference was held from January 21 to 24 inclusive at the University of Arizona at Tucson and a most worthwhile program was presented.

Summer Conference The Summer Conference was held at Prescott on July 17 and 18. The main subject discussed was the relationship of Extension Service to Rural Rehabilitation and Rural Resettlement. Plans were worked out whereby the two agencies, Rural Rehabilitation and Rural Resettlement and Extension Service would cooperate with the National Program of Rural Resettlement.

### Pure Bred Breeders Association and Club

The County Agent's office cooperated with the Arizona Jersey Cattle Club in holding a two day tour of the Jersey cattle breeders in the County, attended by breeders and at which, Mr. Ivan C. Loughary, Western Representative of the American Jersey Cattle Club was present. A very interesting and profitable time was spent.

The office also assisted the Arizona Holstein Friesian breeders association to put on a sale during April. Twenty-four animals were sold, averaging about \$90.00 per head, including calves. The sale was rather encouraging to breeders, their cattle bringing almost double that for cattle of the same quality.

The County Agent's office assisted the Holstein-Friesian Club in planning and conducting a tour of the Valley, at which time, Mr. H. A. Mathiesen, Western Representative of the Holstein-Friesian Association was present.

### State Fair

The County Agent's office met several times with groups of breeders and other representative livestock groups with the Arizona State Fair Commission for the purpose of discussing plans for the proposed new fair buildings at the State Fairgrounds. Tentative plans, showing size, shape and general location of these buildings were prepared in the County Agent's office with the assistance of the breeders and other agricultural groups and submitted to the State Fair Commission.

### Arizona Milk Producers Association

The County Agent's office cooperated with the Arizona Milk Producers Association during the year in the operation of the Association. The association, as explained in previous annual reports, is starting on the third year of the cooperative plan with the Associated Dairy Products Company at Glendale. This cooperative arrangement has resulted in an estimated four cent increase per pound butterfat for all butterfat produced in the Salt River Valley, regardless of where marketed. The plan is highly satisfactory to the dairymen and is being carried forward in a harmonious manner.

The Arizona Milk Producers Association has actually supported the Federal Milk License for the Phoenix market and was instrumental in having the license established in November 1934 and unquestionably the success of the license has been largely due to the fact that a great number of dairymen producing Grade A milk in the Phoenix market, are members of the Association and to the careful, consistent manner in which these organized dairymen, through their Association, have approached the Market Milk License and cooperation they have given the Market Administrator.

### Arizona Turkey Growers Association

The Arizona Turkey Growers Association was organized in the fall of 1932 and affiliated with the Northwestern Turkey Growers Association with headquarters at Salt Lake City, Utah. It has operated very satisfactorily in the fall of 1934 and winter of 1935. The volume handled during this marketing season was slightly less than that of 1933 and 1934. Final reports have not been received to date because of the fact that a considerable number of pounds had to be held over in storage and sold during the summer. This report will probably be available about December.

The reason for the lower volume handled during the past season was due to the fact that there was much more demand for turkeys by buyers and the prices were better than during the past two or three years, however, the Association served as an outlet for the surplus turkeys at a very favorable price and without question, stimulated competitive buying and prices paid locally. It is very questionable if anywhere near the same local price would have been maintained if it had not been for the local association. The County Agent's office cooperated in every way possible with the Turkey Growers Association during the shipping season.

This office has cooperated with Mr. R. A. Faul, Manager of the Arizona Turkey Growers Association in handling the details of the

Association, throughout the year. In connection with this work, a two day Government Grading School was held in Phoenix with Mr. Thomas W. Heitz, of Washington, D.C. in attendance. Also, a turkey killing and dressing demonstration was held at the U. S. Poultry Experiment Station near Glendale, at which time, Mr. A. Willardson of the Northwestern Turkey growers Association was present.

The Thanksgiving pool has just been closed with 300 birds being received in the pool. The outlook is very favorable for good prices for turkeys through the Association and we are looking forward to a larger Christmas pool.

## VI. OUTLOOK AND RECOMMENDATIONS, INCLUDING SUGGESTED PROGRAM OF WORK FOR NEXT YEAR

Project activities for 1936 will be carried out quite similar to those of the past year. With the Agricultural Adjustment Administration program on wheat already out, one being prepared at the present moment on corn-hogs, one on cotton which is still to be put in final form and one on potato licensing, one can realize that it is rather difficult to plan definitely, any Extension projects on a definite or fixed schedule of time. We realize that it is impossible, because of unforeseen happenings, for the Agricultural Adjustment officials to have their programs completed and out in the field for farmers to give any amount of consideration previous to planting time, however, this program, if to be adequately administered and obtain the full-hearted support of farmers, it would be most advantageous that every Adjustment Program be prepared and ready for the farmers several weeks before planting time. As it has been during the wheat program this year, and as it occurred with the Cotton Acreage Reduction Program in the Spring of 1935, application forms and final regulations were not in the field in time for farmers to make their plans and in many instances, had already planted their crops so that it was very difficult for them to conform to any of the regulations prescribed in the plan.

It is planned to continue the regular Extension Projects that are of major importance, during the coming year, such as Irrigation Practice, Pure Seed, Weed Eradication, Dairy Farm Management, Dairy Herd Improvement, Citrus Bud Selection and Insect Pest and Disease Control. Many of the projects which we carried during the past few years, will either be completely dropped or only carried as minor projects. We will follow the usual practice of delegating definite responsibility to Assistant Agents, in order to cover as much and as many fields of endeavor as possible and still not lose our identity with the farmers of the communities and farm organizations and other related organizations as they affect the long-time Extension policies.

It seems particularly important that very careful consideration should be given to the setting up of the Agricultural Adjustment Administration commodity control contracts so that they will more adequately fit irrigated agriculture conditions. It is further recommended that the tentative rules, regulations and contracts be placed in the Extension Service hands so that they may be taken out to the farmers for their suggestions before they are finally printed, in order that the program can be more effectively administered. By this procedure,

it is believed that the farmers will feel that the program is part of their responsibility and will be much more cooperative in assisting to carry it out.

Many more educational meetings should be held to familiarize all farmers in the County with the individual commodity programs as well as the general effectiveness of the entire Act. For this reason, plans are now under way to carry out a series of meetings in the County on the group discussion basis, under the guidance of A. B. Ballantyne, Rural Sociologist. These meetings are to follow the suggested plan of the Secretary of Agriculture, Henry A. Wallace.